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ABSTRACT

Components that should comprise a model for analyzing the impact of educational reform are discussed. An analytic framework is presented that consists of a synthesis from research of the following elements considered crucial in the formation of such a framework: (1) objectives or goals of the reform; (2) processes used to reach those objectives; and (3) outcomes that result from interaction of the objectives and processes. These categories are placed and analyzed in a broader social, political, economic, and cultural context that in turn is placed within an ideological context or theoretical perspective. Positivism, interpretivism, and critical theory are compared; and critical theory is identified as the basis of the proposed analytic framework. The next layer of the model explores contextual considerations. A model must also include an analysis comparing the objectives of the reform to the processes by which the reform is conceived and implemented. A model based on critical theory supports the necessity of using standards of societal concerns to assess the degree to which educational outcomes have been achieved. Assessing this degree of achievement is accomplished through an analysis of specific policy goals and outcomes and then through questioning standards and criteria that had previously been accepted as givens, such as equity and quality of life. (Contains 62 endnotes and 32 references.) (SLD)

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An Analytic Framework for Evaluating the Impact of Education Reform

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Introduction

This paper is a theoretical discussion of those components which should comprise a model to analyze the impact of educational reform. While a multitude of evaluation models exist, they are often limited in that they focus on one aspect of evaluating reform at the expense of others. For instance, models which emphasize the initiation of the reform may not look at dissemination or implementation of the reform. Models looking at reform from the perspective of what goes on within classrooms may not include an analysis of the contextual variables within which the reform is situated. Or models utilizing a simplistic linear analysis may merely compare inputs of the reform to educational outcomes.

Consequently, models or analytic frameworks for assessing educational reform generally do not include a wholistic analysis of all the necessary variables for evaluating impact. It becomes difficult, then, for federal, state, and local policymakers to make wise choices regarding appropriate models for effective implementation or assessment of reform efforts. In critiquing models for evaluating education reform Larry Cuban says

> it is still not clear which implementation strategies are most effective because few researchers have investigated the connections between strategies and outcomes. Most researchers have recognized the tangled complexity of such diverse elements as context, roles, individual, organizational factors such as size, history, and culture, quality of leadership at both district and school levels, timing, and other critical determinants of successful implementation. Beyond recognizing this complexity, few researchers have proceeded further than to construct inventories and taxonomies of essential points in establishing causal relationships between strategies and outcomes.[1]

Thus, the following analytic framework for evaluating the impact of education reform consists of a synthesis from the research of those elements considered crucial in the formation of such a framework. Three separate categories: (1) objectives or goals of the reform, (2) processes used to reach those objec-

tives, and (3) outcomes which result from an interaction of the objectives and processes form the basis of this framework. These three categories are placed and analyzed within a broader social, political, economic, and cultural context which in turn is placed within an ideologic context or theoretical perspective. The resulting framework is schematically represented on page 23.

Analytical Framework for Analyzing Impact of Education Reform

Ideological considerations. The first consideration, as shown in the outer layer of this model, needs to be an acknowledgement of the social science paradigm which influences and guides one's work as this will have an influence on the ideological perspective and ultimate values forming the basis for the model. According to Wilfred Carr and Stephen Kemmis,

> paradigm embodies the particular conceptual framework through which the community of researchers operates and in terms of which a particular interpretation of 'reality' is generated. It also incorporates models of research, standards, rules of enquiry and a set of techniques and methods,...consistent with the view of reality that the paradigm supports.[2]

Most evaluation models, especially those following empirical-analytical rules or a subjectivist-relativist position, have traditionally overlooked the importance of acknowledging a theoretical base and value-orientation shaped by an underlying ideological perspective as Rolland Paulston contends, "many unspecified theoretical and ideological axes are ground in educational change and reform studies, but, unfortunately, little of this is ever acknowledged or made explicit."[3] Any model overtly ignoring ideology is lacking a crucial element as ideology helps form the basis of value systems and perceptions of the world, the nature of humankind and society and relations of power within society. Messick (quoted by Paulston) asserts that

> what is at issue is ideology. It is not the implications of research per se that are to be implemented in the proposed strategies, it is the implications of research as interpreted or filtered through a particular ideology about the nature of man and society.[4]

Thus, ideological perspective determines what values ought to be a part of any framework for evaluating education reform, influ-

ences how the evaluation actually is conducted (the methodologies used), and impacts on the types of questions that are ultimately addressed regarding the focus of the evaluation.

As evaluation practices are never value-free, one must then determine what values should guide the practice of doing evaluation to assess impact of the reform. According to Kenneth Sirotnik and Jeannie Oakes "there are some values that we cannot negotiate away no matter what the evaluative problem or setting might be."[5] They believe the values of social justice and social equality are paramount and must be at the heart of evaluative inquiry to use as a standard for interpreting whatever empirical data might emerge. Taking these values into consideration a brief discussion follows comparing and contrasting positivism, interpretivism, and critical theory.

(1) Positivism. The positivist paradigm has traditionally dominated the field of educational evaluation. Rationale for this model comes from the premise that science allows us to control the natural world, so it should therefore also allow us to control education and make it more congruent with the needs of society and its members.[6] While positivism is assumed to be an unbiased, value-free, objective view of society and the world, an historical analysis by Thomas Kuhn reveals that a positivist conception of objective knowledge is nothing more than a myth. He argues that science needs to be seen as a series of revolutions in which the dominant paradigms are overthrown and replaced with new ones.[7] This alone attests to the fact that a switch in paradigms means acceptance of new values and new beliefs. Consequently, objectivity becomes hard-pressed to prove and the absolute logical distinction positivists make between theory and observation is, thus, undermined.

In an era calling for accountability and tighter control of the curriculum, evaluations conducted from a positivist theoretical perspective have supported utilization of standardized tests as a means to judge the degree of fit between student behavior and learning objectives.[8] Accountability measures have been

criticized by Thomas Popkewitz who believes these measures equate education to the specification of precise, measurable objectives or outcomes, have a limited focus on learning mastery, and ultimately result in improved efficiency and control of school organizations.' Another limitation, he sites, is the way in which positivism defines change processes in schools as nothing more than "a rational, logical sequence, subject to analysis and implementation through a science of management."[10] He says,

> accountability creates a map of the world that seems to provide an interpretation of everyday life. This... assumes consensus and diverts attention from the struggles, strains, and contradictions that underlie institutional practices...making current objectives more concrete and measurable rigidifies existing content, structure, and value.[11]

(2) Interpretivism. The goal of evaluation, conducted within an interpretivist theoretical framework, is to understand the subjective meaning of reality as interpreted by the actors, themselves.[12] Regarding interpretivism, Egon Guba and Yvonna Lincoln assert that

> what there is that can be known exists only in the minds of people in the form of constructed realities. Each person has a different construction, shaped by such things as his or her experience, sophistication, opportunity to learn, and especially by his or her value system.[13]

The evaluator's responsibility is to report these subjective meanings to the intended users of evaluation. Doing evaluation involves gaining multiple perspectives of part cipants, insights, and meanings from the educational situation being studied or evaluated. Data collected is validated by cross-checking the different sources of data, comparing the various perceptions of the participants, and through negotiation, determining evaluative standards. "Evaluation knowledge, then, is defined as valid only to the extent that it reflects the consensus of the educational participants in each evaluation situation."[14]

As with positivism, the evaluator stands outside the evaluation situation "adopting a disinterested stance in which any

explicit concern with critically evaluating and changing the educational realities being analyzed is rejected."[15] Reporting perceptions from the perspective of the participants, can thus result in politically conservative evaluations due to an uncritical analysis of the historical and political context within which the evaluation is being conducted. "While it may be true that consciousness 'defines reality', it is equally true that reality may systematically distort consciousness.[16] This distorted consciousness or "false consciousness," as Habermas refers to this concept, means people fail to question their realities because of the effect of socialization which may prevent awareness of social situations that are contradictory, especially those with the potential to disrupt the existing harmony or status quo.

(3) Critical theory. Critical theory, as a guiding theoretical perspective for conducting educational evaluation, rejects positivist notions of rationality, objectivity and truth while legitimizing teachers' interpretive categories. In its critical orientation to situating practice politically and historically, it enables one to distinguish ideologically distorted interpretations from those which are not. Although methodologically critical theory outlines the study of particular kinds of problems, the aim is enlightenment and emancipation, it is not interested with what is but rather with what can and should be.[17]

While critical theory models of evaluation contain some of the same components as other models coming out of positivistic and interpretivist paradigms, the differentiation focuses on the questions and values guiding the practice of the evaluation. One of the guiding tenets of critical theory is that it is embedded in questions regarding power relations in a society. Ignoring these relationships can ultimately result in the wrong conclusions being drawn. Landon Beyer and Michael Apple assert that every curricular evaluation process must ask prior questions regarding "evaluation for what social, economic, and ideological purpose?"[18] Donna Coomer believes the questions upon which a critical evaluation is based, must reflect the relationships

between educational change and concepts of power, knowledge, ideology, schooling and evaluation practices.[19]

Critical theory has been criticized philosophically and from the pespective of practicality and relevance. While I acknowledge that criticisms of a philosophical nature regarding Habermas and his theory are in order, discussion of those issues is beyond the scope of this piece.[20] Regarding practicality and relevance to real life experiences, Young says,

> perhaps the central theme...is that the historical self-relation of theory points to an ever present danger of constructing the interest in emancipation in too idealistic a form -- in such a form it cannot be actually understood and practically carried out by real historical subjects.[21]

Although ideals are an important and necessary part of theory, there remains a need to apply them to practical circumstances. Thus, a common criticism waged against critical theory especially by persons rejecting the legitimacy of its claims, is its idealist or utopian stance. On the other hand, intellectuals become disenchanted with the slow progress of practitioners in realizing change, rather than recognizing that the crucial role of ideals is to help guide one's practice. As Young asserts,

> it is not the understanding of intellectuals which will carry forward actual changes, but the democratic process of many voices and practical problem-solving on a day to day basis.[22]

Given these criticisms, however, critical theory and the values supported by this paradigm form the basis of this proposed analytic framework.

Contextual considerations. Having explored ideological perspectives and social science paradigms, the second layer of this evaluation model addresses the broader social, cultural, political, and historical context. Decontextualized models, simply showing linear relationships between inputs of education reform and expected outcomes, have severe limitations. A critical reflection demands an awareness of how educational structures, contexts, and processes are connected to the social and political

forces both inside and outside the school.

Martin Carnoy and Henry Levin's treatise of the impact of the State on educational reform provides an effective means to analyze reform in a broader socio-political-economic-cultural context.[23] A contextual analysis of education reform is necessary because educational practices are in reality social practices and educational reform is social reform.[24] As public institutions, whose purpose is to serve a varied constituency with differentiated expectations, any analysis disregarding this larger, broader context would be amiss as Martin Carnoy and Henry Levin assert,

> schools in America are largely public institutions. As such, they are subject to direct political pressures that are conditioned by the overall conflict between capital and labor, by the changing structure of the labor market, and by various social movements seeking greater equality.[25]

Schooling, afterall, does not merely exist to serve the values of education, but also serves particular social interests and the institutionalized self-interests of particular groups.[26] Failure of educational reforms then, is largely due to a lack of understanding regarding the nature of educational change and its relationships with the socio-economic environment or avoiding specification of "external" factors that lead to conflict over reform priorities. A contextual analysis, thus, helps account for the seeming contradictions in the various education reports coming out of the 80's with some calling for reform efforts aimed at efficiency, some for excellence and some for equity.

Broad contextualized conceptualizations of education reform are criticized, however, from the perspective that they consist of macro analyses of education and schooling. Macro approaches often regard human beings as little more than products of socialization with human creativity seemingly ignored and human freedom non-existent. According to Eric Bredo and Walter Feinberg, "macro approaches fail to grasp the reality of life in schools and do not help us understand what makes teachers and pupils 'tick'."[27]

Components of the model. While impact is generally the end process of a reform effort, any framework analyzing impact also needs to be concerned with the steps and processes leading up to impact, as those will definitely influence the impact of the reform effort. Thus, a model must include an analysis comparing the objectives of the reform to the processes by which the reform is conceived, formulated, and implemented. Richard Sack proposes such a two-dimensional conceptualization of reform which includes questions regarding both the objectives of the reform and processes of the reform.[28] A third category regarding the outcomes of the reform needs to also become a part of such a model. An adaptation of Frank Fischer's model for doing critical research is included in this framework.[29]

(1) Objectives of the reform. In looking at objectives (or planned outcomes) of reform, Sack discerns between two major types: (1) those which are conceived and defined in terms specific to the educational system itself and (2) those which are conceived and defined in terms external to the educational system.[30] Examples of objectives falling within the first category could comprise pedagogical reforms intended to improve teaching and learning practices or reforms intended to increase efficiency measures within schools. Reforms of an external nature comprise examples such as the development of a better articulation between the education system and the employment structure of the economy or the democratization of the school system to eliminate class, race or gender inequalities.

A logical point of departure regarding objectives is to analyze them against the broader context within which the reform is situated. The scope of this analysis is dependent on whether the reform effort is federal or state legislation, local initiatives, or programmatic initiatives (such as calls for reform from the National Council of Teachers of Mathematics). This broad-based analysis is important because having a more in-depth understanding of the reform (i.e. the purpose of the reform, why it came about, the need for the reform, its intended outcomes,

etc.) has the potential to open up the realm of possibilities and alternative strategies that a district or school can pursue in actually meeting compliance or in implementing said reform.[31]

Asking basic questions about the objectives of school reform is critical, also, because the objectives of school reform are often denied by discrete programs or are kept purposely ambiguous. In the example of the current push for excellence, an assumption is made by policymakers that if the various program objectives are realized, educational excellence naturally follows. At the same time, "there is no definition of excellence, no concept of what excellent schools, as institutions should look like."[32] Therefore, the task of evaluating those outcomes becomes a matter of evaluating criteria which are more prone to measuring, but what is measurable often has little relation to a program's original objectives.[33]

In considering the objectives of the reform within the broader context, an even more fundamental question needs to be asked: "what is the perceived purpose of schooling and how does this particular reform fit within that purpose?" This is an important consideration because differing perceptions of schooling purposes (i.e. socialization vs. sorting functions vs. empowerment) will impact on the adoption and acceptance of reforms depending on the congruence between the reform and the felt need[34].

(2) Processes of the reform. The second category which forms the basis of this framework focuses on the processes by which the reform is conceived, formulated and implemented in determining the impact of the reform. This is a key element because the strategies used regarding these processes are central to the outcomes of the reform effort. Processes include four categories: (1) level and nature of participation, (2) flow of information both upward and downward, (3) decision-making processes, and (4) resource allocation processes.

(a) Level and nature of participation. In analyzing the impact of the reform using participation measures, it is critical

to look at the level and nature of participation during both the conception and implementation of the reform. A critical part of this component is also looking at who participates in the process. The concern has typically been for teacher involvement in initiating reform efforts, but it is equally crucial for principals and other educational leaders within the district to be visibly involved as well.[35] In addition to the traditional people in the educational setting, more collaboration is needed, both within the education establishment and beyond to include parents, legislators, governors and the community as a whole.[36] Regarding curricular reform issues, Shirley Grundy suggests that students, also, should be a vital part of that process; not only on the receiving end but involved in the critical decision-making operation as well.[37] A critical perspective would look at who was involved in the process and ask why particular groups were either involved or omitted from the process.

In any reform effort, it is crucial to involve teachers in all phases of the reform, from planning through implementation. According to the *Rand Study*, teacher involvement enhanced local commitment and motivation as well as built capacity to use an innovation.[38] The literature stresses that local participation in project planning increases the possibility that changes will be appropriate for the particular setting.[39]

The nature of participation seeks answers to how people feel about becoming involved in the reform effort; did they participate willingly or was participation mandated? The nature of participation can have profound effects on the eventual outcomes of the innovation.[40] In an evaluation of federally funded change agent programs, Paul Berman and Milbrey McLaughlin categorized reason for involvement as either opportunism (becoming involved due to available funds) or problem-solving (becoming involved due to a felt need). They found lack of interest and commitment to projects generated essentially by opportunism as compared to strong commitment for problem-solving projects.[41]

Based on his research of a school district piloting PPBS

(Planning Programming Budgeting System), Harry Wolcott concludes that teacher's perceptions of the usefulness of the innovation will impact on the nature of their involvement.[42] He concludes that compliance doesn't necessarily ensure enthusiastic support nor does resistance imply total lack of involvement, but rather, there are degrees of participation as well as degrees of resistance. From a critical perspective, the issue of resistance could be attributable to feelings of alienation or deskilling which sometimes occur in prepackaged reform efforts.[43] Thus, the source and reasons for resistance need to be ferreted out very carefully.

(b) Flow of information both upward and downward. This category refers to the communication process both to and from the school regarding the reform effort. In the case of planning for reform, Richard Sack says,

> the flow of information is particularly important since reforms exist in relationship to some perceived need for change whose nature, existence, and intensity are conveyed to planners by the quality and availability of the information they receive.[44]

In looking at the flow of information consideration needs to be given to the quality of the communication process between the organization (government, private, research, etc.) mandating the reform and the school involved in implementation. It must also consider the best method to provide needed and relevant information regarding the reform and of what that should consist.

In the *Rand Study*, Paul Berman and Milbrey McLaughlin found that top-down directives, even when issued with the best intentions, generally met with indifference or resistance at the school level.[45] David Marsh and Gregory Bowman, on the other hand, argue that top-down content-oriented strategies are effective for implementing comprehensive reforms, but require bottom-up participation to be effective.[46] Bottom-up process-oriented reform strategies were found to be more effective for implementing unique programs focusing on specific student populations.[47]

Staff development needs become a consideration within the

information flow component. In studying the impact of staff development on education reform, Nancy Rennau Tomposky says,

> it appears that teachers' dispositions to deal favorably or not with proposed curriculum changes are (sic) related to how they construe their roles in the educational process. When this perception is at odds with the teacher role envisioned by curriculum designers, the role mismatch can be the source of resistance to implementation.[48]

Consequently, policy-makers see staff development primarily as a technical service rather than as a learning experience for all the participants. Those providing staff development typically focus their efforts on skills training through demonstration and practice, rather than giving adequate attention to the conceptual underpinnings of a given innovation. What is needed is staff development which is:

1. ongoing and interactive wherein participants can discuss their perceptions of the change process during its different phases of implementation;

2. provided by teachers themselves;

3. designed by the teachers, themselves where they can select, define, and solve problems as they arise rather than being organized around predetermined topics generated by professional reformers or academicians; and

4. formative in nature, i.e. an ongoing assessment of curriculum as it is being implemented.[49]

In studying science education reforms in New York, E. Wayne Ross, Nathan Aubrey, Christine Berte, and June Cohen examine the contradictions which exist within a system stressing measurement-driven curriculum and teacher professionalism at the same time.[50] While the issue of teacher professionalism advocated teacher dialogue with policy-makers on the reform, teachers, for the most part, felt they didn't have a voice in the reform itself. Instead they were primarily perceived as passive recipients of a reform effort and their role was reduced to that of technicians.[51]

A critical reading of this issue may involve asking ques-

tions about the origin of the reform and the role of teachers in the process; are they merely passive recipients of information and considered as technicians in carrying out the reform or are they empowered to make critical decisions regarding the implementation of the reform?

(c) Decision-making processes. In examining this process, two modes of decision-making need to be considered: (1) centralization vs. decentralization and (2) democratic vs. technocratic decision-making. The role of decision-making on the impact of reform is illustrated in three case studies of state-initiated reform in Texas, California and South Carolina.[52] Texas used a highly centralized and technocratic, rational planning approach to implementing state reform efforts, California a laissez faire approach and South Carolina an extremely democratic approach allowing for input from nearly 40,000 persons state-wide. Thomas Timar and David Kirp assert that "the distinguishing attributes of (South Carolina's) strategy are consensus on policy goals, discretionary authority in implementation, and a strong commitment to state goals," which ensured a much higher degree of success than the other two states.[53]

Regardless from whichever level the reform is emanating (i.e. national, state or local) the site of decision-making can ultimately effect impact of the reform. "The tension between increased state regulation and the need to maintain local flexibility poses a fundamental dilemma in the effort to implement excellence" or any reform effort.[54]

Questions regarding decision-making processes from a critical perspective include: (1) how do differences in management processes effect policy outcomes and what implications do they have on issues of control, (2) who needs to be involved in making decisions and how does this involvement contribute to ownership, or how does lack of involvement lead to alienation, and (3) how can democratic processes of decision-making pose less of a threat to those in leadership roles whose current positions are tied to the existing power structure within a school?

(d) Resource allocation processes. Resources includes both material and human resources. More than any other local condition and its impact on how reform strategies are enacted in a school is the concern regarding availability of school resources. "If staff time and the money to purchase staff time and materials are scarce, it is unlikely that change activities will make much, if any, headway."[55] Source of resources also is a major consideration; whether federal money or other sources of money are available and consequent continuation of the project when funds run out.

Questions bringing a critical perspective to the resource category include: (1) what is the basis of resource allocation, (2) what kinds of reforms typically get funding, (3) which interest groups in society are getting funding for their reform proposals and which are not, and (4) what or who is determining prioritization for funding.

(3) Outcomes of the reform. The final category of key questions focuses on the outcomes of the reform effort. The rational systems approach uses a linear model in implying that improvements in educational outcomes (the immediate effects of schooling) should lead to improved social outcomes (changes in the society).[56] A reading of the literature, however, points to the fact that this relationship is not necessarily linear; an improvement in one doesn't necessarily lead to an improvement in the other.[57] Therefore, other models, such as Frank Fischer's critical theory model warrant consideration to determine the outcome of a particular reform effort.[58]

A model based on critical theory supports the necessity to use standards of societal concerns in assessing to what degree educational outcomes have been achieved. As mentioned earlier, the values of social justice and equity become the standard through which impact of education reform is evaluated. Assessing the degree of achievement of educational outcomes is accomplished through two levels of analysis. The first level of questioning connects specific policy goals and outcomes to the larger society

(more of a functionalist approach to doing evaluation).[59] Questions at this level include: (1) do program outcomes contribute to the efficiency of dominant social practices and institutions and (2) are program outcomes politically acceptable.[60] Cleo Cherryholmes says that "analysis at this level remains fundamentally instrumental, and dominant social values are accepted as valid." [61] The second level of analysis questions the criteria and standards that previously had been accepted as givens. Consequently, questions could include: (1) are the outcomes equitable and just; (2) do they promote the advantage of all; and, if not, (3) is it possible to alter social practices and institutions to further the advantage of all. Other questions could be: (1) whose interests are served or who benefits from the reform effort, (2) does the reform reinforce the status quo or assist in challenging the status quo, and (3) does the reform increase the quality of life of persons who are involved in the education process and lead to transformation of individuals or society. Although the questions will vary, the values serving as a filter or criteria for assessing the reform emanate from a critical perspective. Michael Apple and Landon Beyer believe that a model for doing program evaluation must include a process of reflection about the interests, values, and ideologies in the program and not merely become a comparison between the stated goals of the program and how closely those goals have been met, as is often the case with technically sophisticated models.[62]

Summary

The purpose of this piece has been to formulate an analytic model to evaluate the impact of education reform. The impetus for this piece has emanated from five years of experience with schools as an evaluation consultant assisting educators to manage and cope with educational changes and reforms initiated or mandated either locally, by the state, or via federal legislation. In assisting educators to look beyond the mere implementation of reform goals and to situate the reform within broader

contexts, this model has enabled me to assist them in deconstructing the reform and implementation processes and has made possible their understanding regarding the acceptance or rejection of reform efforts. Achieving this understanding has proven to be empowering to teachers. However, much work still needs to be done to enable teachers to reflect on how their understanding of and involvement in school reform enables children to become transformative intellectuals and society to become more just and equitable.

Endnotes

1. Larry Cuban, "Transforming the frog into a prince: effective schools research, policy and practice and the district level," Harvard Educational Review, 54, May 1984, p. 140.

2. Wilfred Carr and Stephen Kemmis, Becoming Critical: Education, Knowledge and Action Research, London: The Falmer Press, 1986, p. 72.

3. Rolland Paulston, "Social and educational change: conceptual frameworks, Special Issue: State of the Art, Comparative Education Review, 21 (2/3), June/October 1977, p. 394.

4. Ibid, p. 374.

5. Kenneth A. Sirotnik and Jeannie Oakes, (Eds.) New Directions for Program Evaluation: Evaluation and Social Justice. Issues in Public Education, Spring, 1990, p. 38. Another work which acknowledges social justice as a basis to analyze hegemony is Michael W. Apple, Ideology and Curriculum, London: Routledge & Kegan Paul, 1979.

6. Wilfred Carr and Stephen Kemmis, p. 52.

7. Thomas S. Kuhn, The Structure of Scientific Revolutions, Chicago, The University of Chicago Press, 1962.

8. Several of the education reports coming out of the 80's emphasize the relationship between test success and achievement. Such is the case with *A Nation at Risk* which is largely an efficiency-driven document. Its prime concern is the nation's welfare in a competitive world market. This report employs data-based analysis of student performance --essentially a technical interpretation of particular 'indicators' -- test scores, and comparative analyses. Thus, achievement and test success are synonymous concepts. *Academic Preparation for College* is another efficiency-driven model of schooling. The thrust of this report is defining standards of educational success which must be demonstrated. Competencies thus become efficiency measures.

9. Thomas S. Popkewitz, Paradigm and Ideology in Educational Research: The Social Functions of the Intellectual, London: The Falmer Press, 1984, pp. 170-173.

10. Ibid, p. 137.

11. Ibid, p. 172.

12. Wilfred Carr and Stephen Kemmis, pp. 83-101.

13. Egon G. Guba and Yvonna S. Lincoln, "Fourth generation evaluation as an alternative." Indiana University (draft copy), 1985, p. 9.

14. Donna L. Coomer, "Reformulating the evaluation process," in Kenneth A. Sirotnik and Jeannie Oakes, (Eds.), Critical Perspectives on the Organization and Improvement of Schooling, Boston: Kluwer-Nijhoff Publishing, 1986, p. 176.

15. Wilfred Carr and Stephen, p. 98.

16. Ibid, p. 129.

17. Ibid, pp. 129-154.

18. Michael W. Apple and Landon E. Beyer, "Social evaluation of curriculum," in Landon E. Beyer and Michael W. Apple (Eds.), The Curriculum: Problems, Politics, and Possibilities, Albany, New York: State University of New York Press, 1988, pp. 359. In using the framework Michael Apple and Landon Beyer suggest an example could involve assessing the degree of success of programs aimed at keeping minority and poor teenagers in high school. If success of the program is determined on achievement scores of pupils only, a connection between the curricular program and the larger society is ultimately lost. While the problem is directly related to the unequal economic apparatus of the larger social order, the evaluation results end up focusing on the merits of the individual or the program itself. A critical theory framework would prove otherwise.

19. Donna L. Coomer, p. 197.

20. In David P. Ericson, "On critical theory and educational practice," in Kenneth A. Sirotnik and Jeannie Oakes (Eds), Critical Perspectives on the Organization and Improvement of Schooling, Boston: Kluwer-Nijhoff Publishing, 1986, pp. 207-227, Ericson offers a critique on critical theory and its relation to educational practice in looking at the basic philosophical tenets as laid out by Habermas.

21. Robert E. Young, A Critical Theory of Education: Habermas and Our Children's Future, New York: Teacher's College Press, 1990, pp. 64-65.

22. Ibid, p. 65.

23. Martin Carnoy and Henry M. Levin, Schooling and Work in the Democratic State, Stanford, California: Stanford University Press, 1985.

24. Wilfred Carr and Stephen Kemmis, p. 207.

25. Martin Carnoy and Henry Levin, p. 5.

26. In an analysis of historical traditions associated with schooling purposes, Martin Carnoy and Henry Levin say that the progressive view of schooling places education in the front lines of social change. The functionalist, taking a technocratic perspective, believes that school structure and practices correspond to structures and practices in the work place. Critical functionalists or Marxists argue that school prepares students for the social relations of production. Those purporting a critical autonomy view believe that schools help create the conditions necessary for the maintenance of ideological hegemony functioning both to sustain and resist the values and beliefs of the dominant society. Other authors have written at length on the relationship of schooling to the wider social context. Joel Spring, American Education: An Introduction to Social and Political Aspects, New York: Longman, 1989, does extensive coverage on the public versus private goals of education, and the political, social, and economic purposes of schooling. He then compares how the national education reports calling for reform, coming out the 1980's, relate to the economic crisis facing the nation.

27. Eric Bredo and Walter Feinberg, Knowledge and Values in Social and Educational Research, Philadelphia: Temple University Press, 1982, p. 233.

28. Richard Sack, "Educational reforms: towards an analytical framework for research and diagnostic planning," Paper presented for the Inter-agency Seminar on the "Organization of Educational Reforms at the Local Level," UNESCO, November 27-30, 1979, p. 9-11.

29. Frank Fischer, "Critical evaluation of public policy: a methodological case study," in John Forester, (Ed.) Critical Theory and Public Life, Cambridge, Massachusetts: MIT Press, 1985, pp. 231-257.

30. Objectives specific to the educational system include pedagogical reforms aimed at improving the quality of the learning process, increasing efficiency of the process, etc. whereas those external to the system are concerned with such things as reduction of inequalities in society, better preparing students for the labor market, etc. For additional information see Richard Sack, p. 30.

31. An example of this could be a school district considering adoption of the recently revised *National Council of Teachers of Mathematics (NCTM)* standards. A guiding tenet is the issue of equity in stating that all children are able to learn advanced mathematics. If teachers are given needed time as a staff to collectively reflect on mathematics history (since the 1950's launch of Sputnik and the resulting impact this had on mathematics education in this country regarding math becoming a content to sort and select children) they may gain some valuable insights into the

tracking programs in mathematics which resulted from that era and they may come to realize the basis of the assumptions they hold regarding who is able to learn mathematics. As part of this analysis, then, they could strategize ideas on how to increase confidence levels in children and parents so that more children would be successful at mathematics. They could wage a campaign to change teacher's attitudes regarding capabilities of certain children, etc. On the other hand, if a decision is made somewhere in the school hierarchy to switch to a new math curriculum without an exercise in contextual analysis, teachers may not have the opportunity to question their assumptions which ultimately can limit children's chances for success in school and life.

32. Thomas B. Timar and David L. Kirp, Managing Educational Excellence, New York: The Falmer Press, 1988, p. 13.

33. For a treatise on the relationship between goal ambiguity and efforts at implementation see William H. Seidman, "Goal ambiguity and organizational decoupling: the failure of "rational systems" program implementation," Educational Evaluation and Policy Analysis, 5(4), Winter 1983, pp. 399-413.

34. An example of this could be the same school district considering adoption of NCTM standards. While the standards encourage incorporation of what is typically considered "high-status" math concepts through-out all grade and course levels of math, schools who practice tracking children into either college-bound tracks (algebra, geometry, trigonometry, etc.) and general-education or vocational tracks (general math, consumer math, etc.) may not see a need to revise their existing curriculum along the lines as advocated by NCTM.

35. Paul Berman and Milbrey Wallin McLaughlin, Federal Programs Supporting Educational Change, Vol. VIII: Implementing and Sustaining Innovations, Santa Monica, California: The Rand Corporation, 1978, p. 30-34; Donald Van Meter and Carl Van Horn, p. 459-460.

36. Joslyn Green, "The next wave: a synopsis of recent education reform reports," Denver, Colorado: Education Commission of the States, February 1987, p. 9.

37. For an extended discussion of student involvement in negotiation of the curriculum see Shirley Grundy, Curriculum: Product or Praxis, London: The Falmer Press, 1987, pp. 121-140.

38. Paul Berman and Milbrey McLaughlin, p. 34.

39. H. Dickson Corbett, J. A. Dawson, and W. A. Firestone, School Context and School Change: Implications for Effective Planning, New York: Teachers College Press, 1984, p. 66; David P. Crandall, Jeffrey W. Eiseman, and Karen Seashore Louis, "Strategic planning

issues that bear on the success of school improvement efforts," Educational Administration Quarterly, 22(3), Summer 1986, pp. 21-53.

40. Paul Berman and Milbrey Wallin McLaughlin, "Implementation of Educational Innovation," The Education Forum, XL(3), March 1976, pp. 345-370.

41. Ibid, p. 352.

42. Harry F. Wolcott, Teachers Versus Technocrats: An Educational Innovation in Anthropological Perspective, Eugene, Oregon: Center for Educational Policy and Management, 1977.

43. For an indepth discussion on concepts of deskilling in education see Michael W. Apple, "Curricular form and the logic of technical control," in Michael W. Apple and Lois Weis, (Eds.) Ideology and Practice in Schooling, Philadelphia: Temple University Press, 1983, pp. 143-165. Michael Apple compares the craft of teaching and current reform efforts emphasizing use of prepackaged curricular materials to an assembly line in a factory wherein labor is divided and then redivided into minute, component parts in the name of efficiency. A similar perspective is offered by Andrew Gitlin, "School structure and teacher's work," in Michael Apple and Lois Weis, 1983, pp. 193-212. Andrew Gitlin believes that reform efforts, as of late, actually limit the transformative potential of teachers and encourage them to act in ways which contribute to the reproduction of dominant societal relations.

44. Richard Sack, p. 31.

45. Paul Berman and Milbrey McLaughlin, p. 15.

46. David D. Marsh and Gregory A. Bowman, "State-initiated top-down versus bottom-up reform in secondary schools," Madison, Wisconsin: National Center on Effective Secondary Schools, March 1988.

47. Ibid, pp. 37-39.

48. Nancy Rennau Tumposky, "Staff development and curriculum implementation," The Educational Forum, 51(2) Winter 1987, pp. 185-194.

49. Ibid, p. 193.

50. E. Wayne Ross, Nathan Aubrey, Christine Berte, and June Cohen, "Public policy, curricular change and teacher professionalism," Paper presented at the American Educational Research Association Annual Meeting, Boston, April 1990.

51. E. Wayne Ross, et al., p. 15-17,

52. Ibid, pp. 64-127.

53. Ibid, p. 118.

54. Thomas Timar and David Kirp, p. 39.

55. H. Dickson Corbett, et al., p. 6

56. William H. Seidman, p. 400.

57. Many authors have written on this subject. For an example see Michael W. Apple, 1979; Michael W. Apple, Cultural and Economic Reproduction in Education: Essays on Class, Ideology and the State, London: Routledge & Kegan Paul, 1982; Michael W. Apple and Lois Weis (Eds.), Ideology and Practice in Schooling, Philadelphia: Temple University Press, 1983; Joel Spring, 1989; Joel Spring, The Sorting Machine: National Educational Policy Since 1945, New York: Longman, 1976; Martin Carnoy and Henry M. Levin, 1985; Charles V. Willie and Inabeth Miller, Social Goals and Educational Reform: American Schools in the Twentieth Century, New York: Greenwood Press, 1988.

58. Frank Fischer, pp. 231-257, outlines four phases for doing critical evaluation: (research findings that technically justify the program. These involve concerns of mainstream systematic, quantitative research -- general experimental design issues; (2) situational validation of policy goals. Questions touching upon phenomenological issues of subjective understanding and evaluation, and whether the understandings of researchers, subjects, and social groupings agree or even approach agreement; (3) vindication of program values at the social level. This phase connects specific policy goals and outcomes to the larger society; and (4) rational social choice. This phase of critical research questions the criteria and standards that previously had been accepted without question. Social criticism and political thought become legitimate contributors to construct validity and program evaluation.

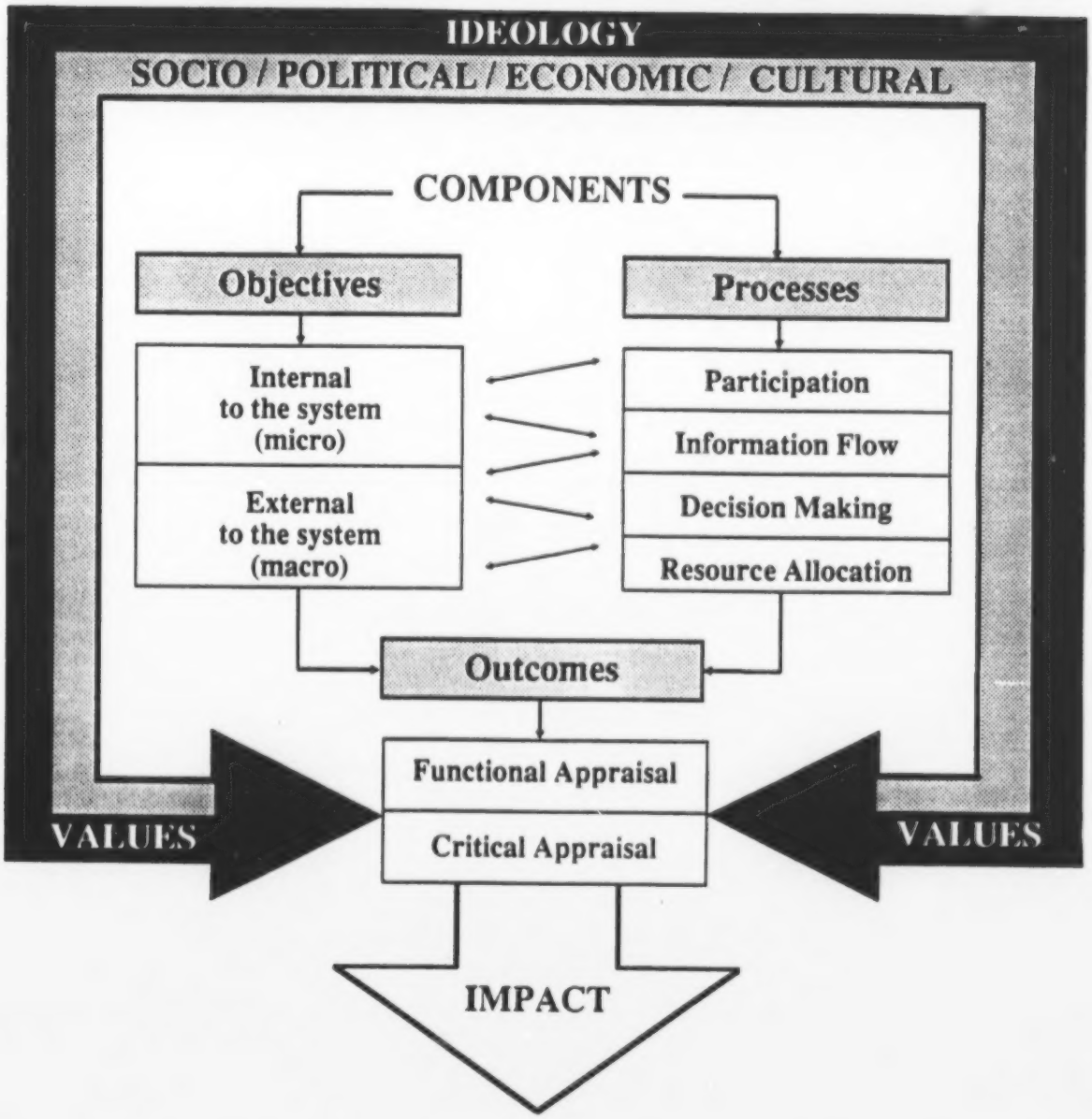
59. Cleo H. Cherryholmes, Power and Criticism: Poststructural Investigations in Education, New York: Teachers College Press, 1988, pp. 111-114.

60. Frank Fischer, p. 246.

61. Ibid, p. 113.

62. Michael Apple and Landon Beyer, p. 335.

Analytic Framework for Evaluating Impact of Education Reform



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